KONOVALOV, G.S.

USSR/Chemistry - Conferences

Card 1/1 Pub. 124 - 19/25

Authors : Alekin, O. A., Memb. Corresp., Acad. of Sc., USSR; Datsko, V. G., Dr. of Chem. Sc.; and Konovalov, G. S., Cand. of Chem. Sc.

Title : Important problems of hydrochemistry

Periodical : Vest. AN SSSR 25/12, 82-83, Dec 1955

Abstract : Minutes are presented from the 19-th All-Union Hydrochemical Conference held in Novocherkask during May 8-13, 1955. The hydrochemical problems discussed and the resolutions adopted are listed.

Institution : .....

Submitted : .....

ALEKIN, O.A.; DATSKO, V.G., doktor khimicheskikh nauk; KONOVALOV, G.S., kandidat khimicheskikh nauk.

Hydrochemistry of bodies of water in connection with hydraulic structures; conference in Novocherkassk. Vest.AN SSSR 26 no.8: 110-111 Ag '56. (MIRA 9:9)

1.Chlen-korrespondent AN SSSR (for Alekin).
(Hydraulic engineering) (Water--Pollution)

KONOVALOV, G.S.

Studying the minor elements in natural waters. Gidrokhim. mat. 26: 19-24 '57. (MLRA 10:8)

1. Gidrokhimicheskiy institut Akademii nauk SSSR, Novocherkassk.
(Water) (Microchemistry)

The Development of the Hydrochemical Research Methods and their Tasks. 30-8-28/37

particularly with respect to automation and express methods. The members of the conference displayed great interest in what was said by the representatives of the Bulgarian hydrometeorological Institute and of the Polish AN.

AVAILABLE: Library of Congress

Card 2/2

AUTHOR: Konovalov, G. S. SOV/32-24-10-59/70

TITLE: A Pipette for Measuring Poisonous and Radioactive Solutions (Pipetka dlya otbora yadovitykh i radioaktivnykh rastvorov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10, pp 1288-1288 (USSR)

ABSTRACT: For taking and exactly measuring highly volatile and poisonous solutions a pipette was devised by modifying the usual glass pipette. At its upper end an opening was made which was covered by a small rubber balloon. At a distance of 30-40 mm from the upper end the pipette is formed to a small ball which prevents the entrance of the liquid into the rubber balloon. A diagram of this pipette is given. The sample-taking is carried out in such a way that by closing the upper pipette opening (in the usual way) and by means of the rubber balloon the liquid enters the pipette. The fixation of the liquid meniscus at the grade is also carried out in the usual way, by a slight increasing of the pressure through the upper opening. After some training all this can be done with one hand only. Otherwise the author recommends holding the pipette with one hand and operating it with the other. There is 1 figure.

Card 1/2

SOV/32-24-10-59/70

A Pipette for Measuring Poisonous and Radioactive Solutions

ASSOCIATION: Gidrokhimicheskiy institut Akademii nauk SSSR (Hydrochemical Institute, AS USSR)

Card 2/2

KONOVALOV, G.S.; OGURTSOVA, O.S.

Fluorine in river waters. Gidrokhim.mat. 29:68-74 '59.
(MIRA 13:5)

1. Gidrokhimicheskiy institut Akademii nauk SSSR, Novocherkassk.
(Rivers) (Fluorine)

KONOVALOV, G.S.; OGURTSOVA, O.S.

Boron concentration in ponds. Gidrokhim.mat. 28:83-90 '59.
(MIRA 12:9)

1. Gidrokhimicheskiy institut Akademii nauk SSSR, g.Novocherkassk.
(Boron) (Russia, Southern--Ponds) (Water--Composition)

KONOVALOV, G.S.; IVANOVA, A.A.; KOLESNIKOVA, T.Kh.; KUTSEVA, P.P.

Formation of some mineral waters in the region of the central Caucasus. Gidrokhim.mat. 34:107-113 '61. (MIRA 15:2)

1. Gidrokhimicheskiy institut AN SSSR, Novocherkassk.
(Dauti Valley--Mineral waters)
(Makhar Valley--Mineral waters)

KONOVALOV, G.S.; SHOKINA, O.N.

Molybdenum determination of natural waters. Gidrokhim. mat. 31:204-208 '61. (MIRA 14:3)

1. Gidrokhimicheskiy institut Akademii nauk SSSR, g. Novocherkassk.
(Water--Analysis) (Molybdenum)

KONOVALOV, G.S.

Study of the mineral components of natural waters. Gidrokhim. mat. 37:109-113 '64. (MIRA 18:4)

1. Gidrokhimicheskiy institut Glavnogo upravleniya gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR, Novocherkassk.

KOVAL'TSOV, V.A.; KONOVALOV, G.S.

Automation of physicochemical methods of determining sulfate ions in water. Gidrokhim. mat. 37:118-124 '64. (MIRA 18:4)

1. Gidrokhimicheskiy institut Glavnogo upravleniya gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR, Novocherkassk.

KONOVALOV, G.S.

Problems of the formation of the chemical composition of natural waters and their significance in prospecting for metal deposits by the hydrochemical method. Gidrokhim. mat. 38:121-126 '64. (MIRA 18:4)

1. Gidrokhimicheskiy institut AN SSSR, Novocherkassk.

KONOVALOV, G.S.

Device for preasurized filtering. Zav. lab. 30 no.9:1149-1150 '64. (MIRA 18:3)

1. Gidrokhimicheskiy institut AN SSSR.

L 7667-66 EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) IJP(c) MJW/JD/HM

ACC NR: AP5025610 SOURCE CODE: UR/0135/65/000/010/0016/0018

AUTHOR: Terent'yev, I. M. (Engineer); Barutkin, F. Ye. (Engineer); Konovalov, G. S. (Engineer)

ORG: none

TITLE: Effect of welding conditions on the density of aluminum-alloy welds

45

B

SOURCE: Svarochnoye proizvodstvo, no. 10, 1965, 16-18

TOPIC TAGS: aluminum alloy, alloy welding, alloy weld, TIG welding, MIG welding, weld density, weld porosity/AMg6 alloy, ATsM alloy, VAD1 alloy

ABSTRACT: The effect of welding conditions on the porosity of AMg6, ATsM, and VD1 aluminum alloy welds in sections 2.5—7.0 mm thick has been studied. Alloy specimens were TIG welded with a one- or three-phase arc and filler wire or MIG welded. Welding current was varied from 51 to 295 amp and welding speed, from 5 to 35 m/hr. At low welding speeds (5—17 m/hr), weld porosity decreased with decreasing welding speed and with increasing specific heat input. At 20—29 m/hr, weld porosity decreased with increasing welding speed, but increased with increasing heat input. At welding speeds higher than 29 m/hr, increasing the welding speed at a constant heat input decreased weld proosity. Weld porosity depends primarily on the temperature of the melting pool and on arc pressure. Lower melting-pool temperatures and higher arc pressures reduce porosity. The hydrogen, which is the primary cause of weld

Card 1/2 * VAD1

UDC: 621.791.856.3.011:669.715

Card 2/2

ZENIN, A.A.; KONOVALOV, G.S.

Some processes taking place in the pollution of river water by mine waters. Gidrokhim.mat. 36:56-63 '64. (MIRA 18:11)

1. Gidrokhimicheskiy institut, Novocherkassk. Submitted December 11, 1961.

KONOVALOV, G.S.; KUTSEVA, P.P.; KOLESNIKOVA, T.Kh.; IVANOVA, A.A.

Change in the chemical composition of natural water under the influence of sorption processes. Gidrokhim.mat. 36:117-124 '64. (MIRA 18:11)

1. Gidrokhimicheskiy institut, Novocherkassk. Submitted December 15, 1961.

KONOVALOV, G.V.

Comparative morphological study of the cytopathogenic effect of related viruses of street rabies and rabieslike disease of polar animals. Dokl. AN SSSR 157 no. 2:451-453 Jl '64. (MIRA 17:7)

1. Institut eksperimental'noy meditsiny AMN SSSR. Predstavleno akademikom N.N.Anichkovym.

KONOVALOV, G.V.; KANTOROVICH, R.A.; BUZINOV, I.A.; RIUTOVA, V.P.

Experimental investigations into rage and rabies in polar foxes, natural hosts of the infection. II. An experimental morphological study of rabies in polar foxes. Acta virol. (Praha) [Eng] 9 no.3:235-239 My'65.

1. Department of Morbid Anatomy, Institute of Experimental Medicine, U.S.S.R. Academy of Medical Sciences, Leningrad; Institute of Virology, U.S.S.R. Academy of Medical Sciences, Moscow; and Scientific Research Institute of Fur Animal and Rabbit Husbandry, Ministry of Agriculture of the Russian S.F.S.R., Moscow.

KONOVALOV, G. V.

An unusual iceberg. Inform. biul. Sob. antark. eksp. no.25:60-61 '61. (MIRA 14:5)

(Antarctic regions---Icebergs)

S/169/62/000/004/056/103
D228/D302

AUTHOR: Konovalov, G. V.

TITLE: Main topographic types of Queen Maude Land

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 57, abstract 4V339 (Inform. byul. Sov. antarkt. ekspeditsii, no. 29, 1961, 27-29)

TEXT: Five topographic types were discovered in the investigation region, occupying an area of more than 300,000 km^2 between 1°W, 16°E, 73°S and the northerly rim of the shelf glaciers. 1) Shelf glaciers which run into the sea in places, have a sloping and hilly relief; this part of Antarctica is girdled by a wide belt (from 50 to 120 km). 2) The ice slope: this occupies a belt with a width of 70 - 100 km and is characterized by a mean gradient of 2 - 3°, nunatak outcrops, and the development of zones of fissuring. The data of the northern and the southern boun-daries of the slope are 150 - 250 and 1300 - 1600 m respectively. 3) An oasis, in the form of a weakly dissected hillocky area covered with moraine material,

Card 1/2

BARDIN, V.I., aspirant; DUNDO, O.P., mladshiy nauchnyy sotrudnik; KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Brief geomorphological characteristics of mountains in Queen Maud Land. Inform.biul.Sov.antark.eksp. no.30:9-12 '61. (MIRA 14:12)

1. Moskovskiy gosudarstvennyy universitet (for Bardin). 2. Nauchno-issledovatel'skiy institut geologii Arktiki (for Dundo). 3. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut (for Konovalov).
(Queen Maud Land--Physical geography)

KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Geomorphology of the Schirmacher Ponds and surrounding area. Inform. biul. Sov. antark. eksp. no.37:8-13 '62. (MIRA 16:4)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Schirmacher Ponds--Geomorphology)

KONOVALOV, G.V.

Insects of Antarctica. Priroda 51 no.12:102 D '62. (MIRA 15:12)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut, Leningrad.
(Antarctic regions—Insects)

KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Wind-eroded depressions in the Lazarev Shelf Ice. Inform. biul. Sov. antark. eksp. no.39:9-12 '63. (MIRA 16:6)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Lazarev Shelf Ice--Erosion)

KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Possible route to the inland Antarctic ice plateau from the Novolazarev Station. Inform.biul.Sov.antark.eksp. no.42:49-50 '63. (MIRA 17:1)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

BARKOV, N.I., mladshiy nauchnyy sotrudnik; KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Nature of the melting of the surface of a glacier north of the Schirmacher Oasis. Inform.Biul.Sov.antark.eksp. no.41:27-30 '63. (MIRA 17:1)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Observations of birds in Queen Maud Land. Inform. biul. Sov. antark. eksp. no.35:45-48 '62. (MIRA 16:11)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

KONOVALOV, G.V. (Leningrad); SHULYATIN, O.G. (Leningrad)

Unique bird colony in Antarctica. Priroda 53 no.10:100-101 '64. (MIRA 17:11)

DUBROVIN, L.I., starshiy nauchnyy sotrudnik; KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Dependence of snow accumulation on the topography in the region of the Lazarev Station. Inform. biul. Sov. antark. eksp. no.45:29-32 '64. (MIRA 18:1)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

MAL'TSEV, V.N., kand. tekhn. nauk; KONOVALOV, G.V., mladshiy nauchnyy sotrudnik

Passage to the Antarctic ice plateau from Molodezhnaya Station. Inform. biul. Sov. antark. eksp. no.51:52-54 '65. (MIRA 18:9)

1. Gidrograficheskoye predpriyatiye Ministerstva morskogo flota SSSR (for Mal'tsev). 2. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut (for Konovalov).

KONOVALOV, G.V. (Leningrad); KHAY, L.M. (Leningrad)

Changes in the kidneys of rabbits in experimental allergic polyneuritis; morphological study. Arkh. pat. no.11:65-70 '64. (MIRA 18:11)

1. Laboratoriya patologii nervnoy sistemy (zav. - prof. Yu.M. Zhabotinskiy) otdela patologicheskoy anatomii (zav. - prof. N.N. Anichkov) i otdela mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof. V.I. Ioffe) Instituta eksperimental'noy meditsiny AMN SSSR.

KONOVALOV, I., doktor tekhn.nauk; PARFENOV, A.; BALANIN, V., kand.tekhn.-nauk; SHCHERBAKOVA, R., kand.tekhn.nauk; BAKHTIN, A.; BALIN, N.

Measures for preventing ice jams on the lesser and greater Northern Dvina. Rech. transp. 21 no.2:44-46 F '62. (MIRA 15:3)

1. Predsedatel' Kotlasskogo ispolnitel'nogo komiteta deputatov trudyashchikhsya (for Parfenov). 2. Nachal'nik Kotlasskogo tekhnicheskogo uchastka Severnogo basseynovogo upravleniya puti (for Bakhtin). 3. Glavnyy inspektor Kotlasskogo tekhnicheskogo uchastka (for Balin).
(Northern Dvina River--Ice on rivers, lakes, etc.)

KONOVALOV, Ivan Antonovich; PUTS, Mikhail Ivanovich; KAPLUNOVSKIY, Yevgeniy Petrovich [Kaplunovs'kyi, IE.P.]; TOCHENIY, P.A. [Tochenyi, P.A.], red.; LIMANOVA, M.I.[Lymanova, M.I.], tekhn. red.

[Give constant attention to the collective farm economy] Povsiakdenno vnykaty v ekonomiku. Kharkiv, Kharkivs'ke knizhkove vyd-vo. 1962. 41 p. (MIRA 16:6)

(Collective farms)

KONOVALOV, I. B.

Experiment at preparation and testing of the vaccine against fowl plague.

SO: TABCON Veterinariya; 23; 1; Jan 1946; Unclassified

KONOVALOV, I. D.

KONOVALOV, I. D. -- "Investigation of Methods of Cleaning and Grading Seed Bean Crops." Sub 23 May 52, Moscow Inst of Mechanization and Electrification of Agriculture imeni V. M. Molotov. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Vechernaya Moskva, January December 1952

KONOVALOV, I.G.

Lever-type self-centering chuck. Mashinostroitel' no.12:21 D '63. (MIRA 17:1)

1. I. I. KONOVALOV

2. USSR (600)

4. Arithmetic - Study and Teaching

7. Implant practical habits in puils in arithmetic lessons. Nach. shkola 21 no. 2. 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KONOVALOV, I.I.

Nomogram for determining the needed value of the resistance rate of enclosures to the heat transmission. [Suggested by I.I. Konovalov]. Opyt rab. proekt. org. no.2:22-24 '57. (MIRA 11:6)
(Heat—Transmission)

VOLYNSKIY, L.M., inzh.; KONOVALOV, I.I., inzh.

Operation of KU-80 waste-heat boilers. Trudy NTO chern. met. 20:298-301 '60. (MIRA 13:10)

1. Zavod "Azovstal'."
(Boilers) (Metallurgical plants)

KONOVALOV, I.I., kand.med.nauk (Yessentuki)

Some characteristics of the course of peptic ulcer in patients after closed cranial trauma. Vrach. delo no.8:140-141 Ag '61. (MIRA 15:3)

(PEPTIC ULCER)
(SKULL--WOUNDS AND INJURIES)

3?2;3

26.2212
24.6740

S/057/62/032/006/006/022
B108/B102

AUTHORS: Safronov, B. G., Voytsenya, V. S., and Konovalov, I. I.

TITLE: Production of pure hydrogen plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 6, 1962, 678 - 681

TEXT: The purification of hydrogen plasma by removing the heavy contaminating ions when the plasma cluster travels through the curved magnetic field of a toroidal coil is investigated. The idea is that the non-uniformity of the field will cause charged particles of different sign to drift in opposite directions perpendicular to the tore through which the plasma moves. The drift velocity is proportional to the mass of the particles and this makes it possible to eliminate the heavy ions which will drift faster than the protons. If the velocity of the plasma is properly chosen, the heavy ions will recombine at the tore walls whereas the light protons can be drawn off at the tore end. In the authors' experiments, the magnetic field in the tore was variable (0 - 500 oe). The method proposed makes it possible to get a hydrogen plasma of spectral purity. At densities of $\sim 10^{10}$ cm^{-3}, the process of purification can

Card 1/2

Card 2/2

ACCESSION NR: AT4025305 S/0000/63/000/000/0154/0162

AUTHORS: Konovalov, I. I.; Krupnik, L. I.; Onishchenko, I. M.; Shulika, N. G.

TITLE: Use of mass spectrograph to obtain quantitative data on the composition of plasmoids

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 154-162

TOPIC TAGS: plasmoid, plasma source, mass spectrograph, ionized plasma, plasma research, magnetic mirror

ABSTRACT: In order to prevent the polarization of a slow plasma and other effects from distorting the results of mass-spectrographic analysis of the plasma, an instrument is proposed in which the ion beam is drawn out from the analyzed plasma and is simultaneously accelerated to 20 keV in the gap of the mass spectrograph. The ener-

Card 1/5

ACCESSION NR: AT4025305

gy spectrum of the plasma ions appears as a corresponding spread over this constant level. The construction of the mass spectrograph is described briefly. The ions were registered with thin-layer emulsions which could be moved in and out of the mass spectrograph without breaking the vacuum. Individual experiments were made to study the density of the image produced on the emulsion as a function of the number of H_1, H_2, H_3, He_4, C_{12}, N_{14}, and O_{16} positive ions with energies from 10 to 20 keV. The apparatus used to calibrate the photographic emulsions is described. Much space is devoted in the article to the various factors influencing the emulsion density. The method described was used to obtain the mass-spectroscopic and energy characteristics of conical and coaxial plasma sources. It is concluded that the described method can be used to extract a great variety of information on the properties and behavior of the plasma. Orig. art. has: 9 figures and 1 table.

ASSOCIATION: None

Card 2/5

KONOVALOV, I.I.

Effect of mineral water from the spring Lastochka on chronic gastritis and peptic ulcer. Klin. med., Moskva 30 no.8:72-76 Aug 1952. (CLML 23:2)

KONOVALOV, I.I., podpolkovnik med. sluzhby

Electrophoretic introduction of Vitamin B_1 into the nasal mucosa in treating peptic ulcer. Voen. med. zhur. no.3:82 Mr '58. (MIRA 12:7)
(CYANOCOBALAMINE) (ELECTROPHORESIS)
(PEPTIC ULCER)

17(SOV/177-58-9-35/51

AUTHOR: Konovalov, I.I., Lieutenant-Colonel of the Medical Corps

TITLE: Practice of Investigating Patients Suffering From Ulceration and Colitis With Utilization of the Verbal Experiment in Sanitaria.

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 9, pp 82-83 (USSR)

ABSTRACT: The author reports on verbal experiments performed on patients suffering from ulceration and colitis for determining the state of cortical processes. Of 40 patients suffering from ulceration in the remittent period, 8 patients showed a normal sleep and steadiness of the cortical process. In 17 patients, weakness of the inhibitory and excitable processes was observed. In 14 patients, the excitable process predominated, and in 1 patient the inhibitory process. Of 100 persons suffering from chronic colitis, changes of the normal

Card 1/2

KONOVALOV, I.I. (Yessentuki)

Condition of the blood capillaries in some diseases as revealed by capillaroscopy. Vrach. delo no. 3:135-136 Mr '61. (MIRA 14:4)
(CAPILLARIES) (VISCERA—DISEASES)

KONOVALOV, I.I., kand.med.nauk

"Lastochka." Zdorov'e 7 no.6:30 Je '61. (MIRA 14:7)
(SIKHOTE-ALIN RANGE—MINERAL WATERS)

GRIGOROVSKIY, I.M., prof.; TALYBOVA, S.T., vrach (Baku); KONOVALOV, I.I., kand.med.nauk (Yessentuki); YARUSOVA, N.S., prof.; FATEYEVA, Ye.M., kand.med.nauk; GOLYAKHOVSKIY, V.Yu., kand.med.nauk

Health hints. Zdorov'e 7 no.8:30-31 Ag '61. (MIRA 14:9)
(HYGIENE)

KONOVALOV, I.I., kand.med.nauk (Yessentuki)

Storehouse of mineral waters; the 100th anniversary of the Russian Balneological Society. Priroda 52 no.8:101-102 Ag '63.
(MIRA 16:9)
(Caucasus, Northern--Mineral waters)

KONOVALOV, I.I.

Late results of sanatorium treatment of ulcerous diseases of the stomach and duodenum. Sbor. nauch. rab. vrach. san.-kur. uchr. profsoiuzov no.1:90-94 '64. (MIRA 18:10)

1. Yessentukskiy sanatoriy imeni I.P.Pavlova (glavnyy vrach A.Ye. Chvamaniya).

L 21706-66 EWT(l)/ETC(f)/EPF(n)-2/EWG(m) IJP(c) AT

ACC NR: AP6004882 SOURCE CODE: UR/0057/66/036/001/0085/0088

49

AUTHOR: Goncharenko,V.P.; Derepovskiy,N.T.; Konovalov,I.I.

B

ORG: none

21,44,55

TITLE: Investigation of the stand-by operation of a coaxial plasma gun

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 1, 1966, 85-88

TOPIC TAGS: plasma gun, hydrogen plasma, plasma purity, mass spectrum

ABSTRACT: The authors have employed a Thomson mass spectrometer to investigate the composition of hydrogen plasma bursts from a coaxial plasma gun to which the firing potential was applied before the gas was admitted (stand-by operation). Stand-by operation of plasma guns has the advantage of simplicity, and the present investigation was undertaken to determine whether plasmas of adequate purity could be obtained from stand-by operated guns. The plasma gun consisted of two 25 cm long coaxial copper cylinders; the outer diameter of one cylinder was 3.2 cm and the inner diameter of the other was 7.9 cm. The inner cylinder had three slots at 17.5 cm from one end through which hydrogen was admitted by means of an electromagnetic valve operated by discharge of a 300 μF capacitor. The potential on the capacitor operating the valve was varied from 1.3 to 3.0 kV, and the gas pressure behind the valve was varied from 2 to 8 atm.; under these conditions the volume of gas admitted to the gun ranged from 0.1 to 3.0 cm^3. The plasma gun was powered by a 1 μF capacitor charged to 16 kV; the

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UDC: 533.9

L 21706-66
ACC NR: AP6004882 O

resonant period of the discharge circuit was 1.5 μsec. The discharge of the plasma gun began from 190 to 300 μsec after operation of the valve, depending both on the power applied to the valve and the gas pressure behind it. The velocities of the plasma bursts ranged between 2×10^7 and 3×10^7 cm/sec and, as was shown by cutoff of 8 mm microwaves, their charged particle densities exceeded 10^{13} cm^{-3}. The impurity content of the plasma bursts decreased rapidly with increasing gas pressure behind the valve and potential applied to the valve. With a gas pressure of 2 atm and a valve potential of 1.8 kV the plasma was 48% hydrogen; with a gas pressure of 8 atm and a valve potential of 2.4 kV the plasma was 92% hydrogen. The principal impurity was carbon, but nitrogen, oxygen, fluorine, and copper were also observed in amounts up to 5% or more. The relative importance of carbon as an impurity increased with increasing purity of the plasma: when the total impurity content was 52%, the carbon content was 31%; when the total impurity content was only 8%, the carbon content was 6%. It is concluded that rather pure hydrogen plasmas can be obtained by stand-by operation of a coaxial plasma gun. Orig. art. has: 3 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 17Nov64/ ORIG REF: 001/ OTH REF: 000

Card 2/2 dda

KONOVALOV, I. M.

4490. Plavka Bronzy Pod Shakovymv Pokrovom (Opyt Bryan. Parovozostroit. Zavoda). M., Mashgiz, 1954. 16 c. c. Graf. 20sm. (m-vo Transp. Mashinostroyeniya SSSR. Vsyesoyuz. Proyektno-tyekhnol. In-t pti. Otd. Tekhn. Infromatsii. Obmyen Tekhn. Optom. Vypl 78). 4.500 Ekz. Bespl.- Avt. Ukazany Na 3-y s.- (54-15035 Zh) 669.356

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

KONOVALOV, I.N.

25687

Opredeleniye koefitsiyenta I linii Szhatiya pri istechenii Zhidkosti iz Bokovogo otverstiya v kanale. Trudy Leningr. In-Ta inzhenerov VOD transporta VYP 15, 1949, s. 18-25.

SO: LETOPIS' No. 34

KONOVALOV, I.M.

25688

Opredeleniye szhatiya strui pri vkhode zhidkosti v trubu iz potoka. Trudy Leningr In-Ta inzhenerov vod transporta, VYP 15, 1949, s. 26-32

SO: LETOPIS' No. 34

1. KONOVALOV, I.M., Dr.

2. USSR (600)

4. Hydrodynamics

7. Approximation theory on the role of bubbles in raising depth water toward the surface, Trudy LIIVT no. 18, 1951.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

KONOVALOV, I.M.; doktor tekhnicheskikh nauk, professor; YEMEL'YANOV, K.S.; ORLOV, P.N.; FEDOROV, V.V., redaktor; VOLCHOK, K.M., tekhnicheskiy redaktor.

[Principles of ice control in river navigation] Osnovy ledotekhniki rechnogo transporta. Leningrad, Izd-vo Ministerstva rechnogo flota SSSR, 1952. 261 p. [Microfilm] (MLRA 7:12)
(Inland navigation--Cold weather conditions)(Ice on rivers, lakes, etc.)

KONOVALOV, I.M.; PEREKHVAL'SKIY, V.S.

[Hydrodynamic effect of pushing ships] Gidrodinamicheskii effekt tolkaniia sudov. Leningrad, Izd-vo Ministerstva morskogo i rechnogo flota SSSR, 1953. 51 p. (MLRA 7:6)
(Towing) (Ship resistance)

124-58-6-6815

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 77 (USSR)

AUTHOR: Konovalov, I.M.

TITLE: The Velocity Field Created by the Flow of a Liquid Past a Thin Plate (Pole skorostey vokrug plastiny, obtekayemoy potokom)

PERIODICAL: Tr. Leningr. in-ta inzh. vodn. transp., 1955, Nr 22, p 3-10

ABSTRACT: In order to determine the velocity field in the vicinity of a flat plate and its wake in a longitudinal flow, it is suggested that the solution of the equation of motion be sought according to the source method, reduced to the following form:

$$\frac{\partial(v^2)}{\partial(x^2)} = a^2 \frac{\partial^2(v^2)}{\partial(y^2)}$$

(The reduction of the equation of motion to the heat-transfer type of equation given above was suggested earlier by the author and is based on the debatable assumption that the coefficient of turbulent viscosity is proportional to the local mean velocity v and the longitudinal coordinate x). A solution for the flow over

Card 1/2

KONOVALOV, I.M., professor, doktor tekhnicheskikh nauk.

Theory of turbulent boundary layers and its use in hydraulic engineering and shipbuilding. Rech.transp.15 no.11:11-13 N '56.
(Turbulence) (MLRA 10:2)
(Frictional resistance (Hydrodynamics))
(Boundary layer)

KONOVALOV, I.M., professor; MYASNIKOV, M.V., inzhener.

Using solar radiation to lengthen navigation seasons. Rech. transp. 15 no.1:13-18 Ja '56. (MLRA 9:5)
(Inland navigation) (Ice on rivers, lakes, etc.)
(Solar radiation)

KONOVALOV, I.M.

3(4,7) PHASE I BOOK EXPLOITATION [illegible]

Vsesoyuznyy gidrologicheskiy s"yezd, [illegible]

Trudy...t. III: Sektsiya gidrofiziki [illegible] of the 3rd All-Union Hydrological Convention. v. 3: [illegible] Section) Leningrad, Gidrometeoizdat, 1959. 470 p. Errata slip inserted. 2,000 copies printed.

Sponsoring agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Resp. Ed.: V.A. Uryvayev; Ed.: V.S. Protopopov; Tech. Ed.: M.I. Braynina.

PURPOSE: This work is intended for meteorologists, hydrologists, and hydrophysicists, particularly those engaged in the study of snow and ice and evaporation processes.

COVERAGE: This book contains papers on hydrophysics which were presented and discussed at the Third All-Union Hydrological Conference in Leningrad, October 1957. The Conference published 10 volumes on various aspects of hydrology of which this is number 3. The editorial board in charge of the series include: V.A. Uryvayev (Chairman), O.A. Alekin, Ye.V. Bliznyak (deceased), O.N. Borsuk, M.A. Velikanov, L.K. Davydov, A.P. Domanitskiy, G.P. Kalinin, S.N. Kritskiy, B.I. Kudelin, L.F. Manoim, M.F. Menkel', B.P. Orlov, I. V. Popov, A.K. Proskuryakov, D.L. Sokolovskiy, O.A. Spengler, A.I. Chebotarev, and S.K. Cherkavskiy. This volume is divided into 2 sections: the first contains reports from the subsection for the study of evaporation processes, and the second contains reports from the snow and ice subsection. References accompany each article.

KONOVALOV, I.M., prof.; BALANIN, V.V., dots.; BORODKIN, B.S., kand. tekhn.nauk; SHCHERBAKOVA, R.I., kand.tekhn.nauk

Extending navigation on inland waters and possibilities of year-round operation. Rech.transp. 18 no.9:33-37 S '59. (MIRA 13:2)

(Ice on rivers, lakes, etc.) (Ice-breaking vessels)

KONOVALOV, I.M., doktor tekhn.nauk, prof.; BALANIN, V.V., kand.tekhn.nauk, dotsent

Formation of river beds. Trudy LIIVT no.26:3-20 '59. (MIRA 14:9)
(Rivers)

KONOVALOV, I.M., doktor tekhn.nauk, prof.; RYAZANOV, G.A., kand.fiziko-matematicheskikh nauk, dotsent; BOROZNA, D.I., inzh.

Applying the theory of a turbulent boundary layer and the electro-hydrodynamic analogy method to a study of flow around ships and their interaction with the propellers. Trudy LIIVT no.26:82-89 '59. (MIRA 14:9)

(Ships--Hydrodynamics)

S/124/61/000/008/018/042
A001/A101

AUTHOR: Konovalov, I.M.

TITLE: Distribution of energy and temperature in turbulent jets

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 8, 1961, 34, abstract 8B210 ("Tr. Leningr. in-ta vodn. transp.", 1960, no. 7, 32 - 40)

TEXT: The formula proposed by the author is derived for tangent stress τ in a turbulent jet. In derivation the equation of motion of a small jet of liquid with variable discharge is used. This formula looks as follows:

$$\tau = - \rho a^2 x \frac{\partial (v^2)}{\partial n}$$

where ρ is density of liquid, a is a constant coefficient (equal to 0.04-0.08), x is axial coordinate of the jet, v is velocity, $\partial / \partial n$ is derivative with respect to the normal. In using the new formula for τ, an equation of energy distribution in a plane turbulent jet is derived with allowance for the own weight of

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Card 2/2

L 15739-63 EPR/EPA(b)/EWT(1)/BDS AFFTC/ASD Pd-4/Ps-4 WW
ACCESSION NR: AR3002679 S/0124/63/000/005/B115/B115

SOURCE: Rzh. Mekhanika, Abs. 5B703

65

AUTHOR: Konovalov, I.M.; Balanin, V. V.; Seleznev, V. M.

TITLE: New theory of turbulent jets and some of its applications in hydrotechnics

CITED SOURCE: Tr. Leningr. in-ta vodn. transp., vyp. 26, 1962, 24-34

TOPIC TAGS: Reynolds equation, turbulence, turbulent exchange, friction, hydraulics, turbulent flow, pulsation, widening, expansion, method, calculation

TRANSLATION: The Reynolds equation, as is known, represents a non-closed system, for besides the parameters of averaged motion it contains the supplementary pulsation terms, on which the two fold correlation of velocities, called the turbulent friction is based. For the completion of this system of equations, various formulas relating pulsation terms with the parameters of the averaged current are introduced. For example, the Trubchikov, Prandtl (new and old), and Taylor formulas are known. All these familiar formulas are based on definite physical representations of the mechanism of turbulent exchange.

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L 15739-63
ACCESSION NR: AR3002679

The authors of the "new theory of turbulent jets" do not allude to any physical concept at all, and introduce into the system of equations a "new" link between friction and the parameters of the averaged motion and thus avoid the analogous, but more usual formula, which has already long figured in the theory of jets as the formula of Reichardt, (see Abramovich, G.N., Theory of Turbulent Jets M. Fizmathiz, 1960, 715 pages) which attained significant development in the work of L. A. Vulis and his collaborators.

The authors consider the problems of the propagation of plane parallel turbulent jets of incompressible liquid in a stationary medium and in current jets; of the velocity field during longitudinal flow arour a flat plate; and of the expansion of an infinite series of plane turbulent jets arising in the surrounding liquid. A similar analysis is made of the velocity field during the propagation of the turbulent jet in the flat channel with sudden widening. Comparisons are made with the experiments of B.A. Fidman, and A.N. Rakhmanov. It is noted that satisfactory agreement between the calculated and the experimental results is attained due to arbitrary variation of the constant coefficient which is contained in the calculation relations (0.02 for free plane

Card 2/3

Card 3/3

KONOVALOV, I.M., doktor tekhn.nauk, prof.; BALANIN, V.V., kand.tekhn.nauk; SELEZNEV, V.M., kand.tekhn.nauk

Plotting the field of speeds in the region of a submerged hydraulic jump. Gidr.stroi. 32 no.7:40-43 Jl '62. (MIRA 15:7)
(Hydraulics)

BALANIN, Vasiliy Vasil'yevich, kand. tekhn. nauk, dots.; BORODKIN, Boris Solomonovich, kand. tekhn. nauk, dots.; MELKONYAN, Georgiy Ivanovich, kand. tekhn. nauk, dots.; KONOVALOV, I.M., prof., red.; LOBANOV, Ye.M., red.

[Utilizing the heat of deep waters to maintain ice-free water areas] Ispol'zovanie tepla glubinnykh vod vodoemov dlia podderzhaniia nezamerzaiushchikh akvatorii. Moskva, Transport, 1964. 271 p. (MIRA 18:2)

1. Leningradskiy institut vodnogo transporta (for Balanin, Borodkin, Melkonyan).

KONOVALOV, I. M.

KONOVALOV, I. M.

"Slide-Flow of Soft Ground,"
Dokl. AN Azerb. SSR, Vol 9, No 9, pp 531-537, 1953, (Azerbaydzhani resume)

The author studies a slide complex which has developed on one of the slopes of the southeastern Caucasus. It consists of two cirques and two slide terraces situated at various hypsometric levels. The author draws the conclusion that the upper and lower slide complexes are an alternation of three morphological zones which reflect the dynamics of a ground mass according to its humidification and transfer from the solid and stiff plastic phase to the plastic, and from the latter to the liquefied phase. (RZhGeol, No 2, 1955)

SO: Sum, No 606, 5Aug 55

KONOVALOV, I.M.

Ancient and long-standing landslides in southeastern Caucasus.
Dokl. AN Azerb.SSR 10 no.5:333-341 '54. (MLRA 8:4)

1. Azerbaydzhanskaya gidrogeologicheskaya ekspeditsiya. Predstavleno deystvitel'nym chlenom Akademii nauk Azerbaydzhanskoy SSR M.A.Kashkayem.
(Caucasus--Landslides)

KONOVALOV, I.M.

Direction of soil creep movements. Dokl.AN Azerb.SSR 11 no.6: 389-394 '55. (MLRA 9:6)

1.Predstavleno deystvitel'nym chlenom AN Azerbaydzhanskoy SSR M.A.Kashkayem.
(Caucasus--Earth movements)

Water Saturation on Sliding Slopes (Cont.)

of water saturation, as exemplified in the northern part of the southeastern Caucasus and the Apsheron Peninsula. The following are the basic factors used in the classification: 1) depth of occurrence of the aquifer; 2) hydrostatic head in the aquifer within the area of the slope; 3) persistence of the aquifer, 4) hydrochemical type and degree of mineralization of the water seeping through the sliding slope; 5) lithic character of the rocks containing the subsurface water and of the surface on which the sliding occurs; and 6) sources of the water seeping through the sliding slopes.

V. S. Kovalevskiy

Card 2/2

KONOVALOV, I.M.

VAIDOV, V.M.; KONOVALOV, I.M.

The tectonically isolated position of Talysh. Dokl. AN Azerb. SSR 14 no.3:213-217 '58. (MIRA 11:4)

1. Institut geografii AN AzerSSR. Predstavleno akademikom AN AzerSSR M.-A. Kashkayem.
(Talysh Mountains—Geology, Structural)

KONOVALOV, I.M.; VAIDOV, V.M.

Features of variation in the total mineralization of water and in the ion composition in the direction of flow of underground water. Dokl. AN Azerb.SSR 16 no.7:669-674 '60. (MIRA 13:9)

1. Institut pochvovedeniya i agrokhimii AN AzerSSR. Predstavleno akad. AN AzerSSR V.R. Volobuyevym.
(Lenkoran Lowland--Water, Underground)

KONOVALOV, I.M., dr., tekhn. nauk, prof.; CHEKRENEV, A.I., dr. tekhn. nauk, prof.; BALANIN, V.V., kand. tekhn. nauk, dotsent; ANTONOV, B.S., kand. tekhn. nauk

Methods of prolonging the navigation period on inland waterways. Trudy LIVT no.46:30-37 '63 (MIRA 17:7)

KONOVALOV, I.M.; STOROZHENKO, S.A.

Genesis of Babaytaudor-type granite syenites. Uzb.geol.zhur. 8 no.3:66-71 '64. (MIRA 18:12)

1. Glavnoye upravleniye geologii i okhrany nedr pri Sovete Ministrov Uzbekskoy SSR. Submitted May 8, 1963.

GUROV, S.A., inzhener; KONOVALOV, I.M., inzhener.

Efficient grooving of the stand of shingling rolls. Stal' 15 no.2: 181-183 F '55. (MIRA 8:5)

1. Stalinskiy metallurgicheskiy zavod.
(Rolling mill machinery)

GUROV, S.A.; KONOVALOV, I.M.

Special features of rolling thick plate. Stal' 16 no.1:69-70 '56.
(MLRA 9:5)

1. Stalinskiy metallurgicheskiy zavod.
(Rolling (Metalwork))(Sheet steel)

KONOVALOV, I.M.

SOV/137-58-8-16061

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 91 (USSR)

AUTHORS: Gurov, S.A., Konovalov, I.M.

TITLE: Improvement in Groovings with the Object of Reducing the Number of Passes (Usovershenstvovaniye kalibrovok s tsel'yu sokrashcheniya kolichestva prokhodov)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp. pravl., 1957, Vol 2, pp 119-126

ABSTRACT: The number of passes on a blooming mill (B) rolling a 200x200 mm bloom from a 3.4-t ingot of 575x575 mm maximum cross section has been reduced from 25 to 15. The possibility of doing this was established as a result of analysis of the load borne by the main motor on each pass. Inasmuch as rolling (R) is done on the B and the 710 mill with a single heating, the increase in the output of the B caused a bottleneck at the finishing line of the 710 mill. To eliminate this, the number of passes on this mill was cut in half by replacing box passes by diamond passes making possible greater drafts. As a result of this substitution, the quality of the R improved and it became easier for the rolls to bite the metal. Analysis of the functioning of

Card 1/2

Improvement in Groovings (cont.)

the 400 mill showed that the motor had unused capacity and that the major elements of the mill had excess strength. The grooving of the 400 mill was re-examined with the idea of increasing the draft. Specifically, under the former R system a 35-mm square was rolled on the roughing line in 5 passes, while by the new system it is done in 3; under the old system 35, 38, and 40-mm squares were rolled in 6 passes on the finishing stand, while on the new it is done in 4. The grooving changes that were made resulted in a 15% increase in the output of the 400 mill in the R of squares. The number of passes in the R of 25x60, 73x10-13, and 89x13-mm, and other strip was cut in half on the 350 mill.

S.G.

1. Rolling mills—Performance

Card 2/2

SOV/130-58-6-10/20

AUTHORS: Revenko, I.F. and Konovalov, I.M.

TITLE: Improving Roll-pass Design of Section Mills (Usovershenstvovaniye kalibrovok sortovykh stanov)

PERIODICAL: Metallurg, 1958, Nr 6, pp 23 - 25 (USSR)

ABSTRACT: At the Stalino Metallurgical Works, a re-examination has been made of roll-pass design for rolling a number of profiles on all rolling mills. The authors describe some of the changes, which aimed at reducing the labour of the operators, improving product quality and making load distribution over the working stands more uniform. They first deal with the 400 mill, which is in two lines with 550-mm dia. rolls in the reducing stand and with 400-mm dia. rolls in the three-stand finishing train. The new (1957) GOST for spring steel with its reduced tolerances made it necessary to abandon the former scheme (Figure 1a) in favour of one (Figure 1b) in which the 107X55 mm product of the reducing stand is rolled with the same number of passes but involving edge passes. This mill rolls spring strip from 55S2 and 60S2 steels; its productivity is said to have been unchanged through the adoption of the new scheme. The authors next consider the 350-mill with a reducing stand with 500 mm dia. rolls and a four-stand finishing train. Here

Card1/3

two passes have been eliminated (Figure 2) in rolling Nr 24 hexagonal bars enabling rolling to be completed at a higher temperature. For rolling 22-mm squares, the system has been changed (Figure 3) from diamond-square to diamond-diamond, reducing the number of passes from seven to five. A similar type of change was made for rolling 26- and 27-mm dia. rounds and 21 x 26, 30 x 16, 30 x 18 and 35 x 18 strip. Mill productivity rose by 15-18% for the hexagonal and square and by 10-15% for the rounds. Finally, the authors describe roll-pass design changes on the 250 mill, which is in three lines: the reducing stand has 500-mm dia. rolls, the middle line has two stands with 350 mm dia. rolls and the finishing line has five stands. The roll-pass design is such that all passes in the reducing and middle lines are constant for all profiles. The rolling of 8 x 16 mm strip of 55S2 steel has been adopted at the mill with a square, diamond, diamond, square with concave

Improving Roll-pass Design of Section Mills

faces and smooth barrel as the successive passes (Figure 4) giving successful results.

There are 4 figures.

ASSOCIATION: Stalinskiy metallurgicheskiy zavod (Stalinok Metallurgical Works)

Card 3/3 1. Rolling mills - Performance 2. Rolling mills - Design 3. Rolling mills - Production

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75581
SOV/130-59-10-13/20

AUTHORS: Konovalov, I. M., Chaban, Z. K.

TITLE: Design of Round-Finishing Roll Pass

PERIODICAL: Metallurg, 1959, Nr 10, pp 26-27 (USSR)

ABSTRACT: The authors believe that the maximum wear which occurs in the part of the roll pass, under an angle of 45° to the horizontal, is caused by maximum reduction in this part of the roll pass. In order to make the roll pass approach a round shape after wear, the authors suggest designing a roll pass with a minimum diameter under a 45° angle in relation to the horizontal. For the design of a round-finishing roll pass, horizontal and vertical axes AD and BC (see Fig. 2)and lines Ne and Mk under an angle of 45° to AD and BC are drawn. Arches with radius $R = R_{max}+x$ forming the roll pass profile are drawn as follows: De from point O_1, MA from point O_2, AN from point O_3, and DK from point O_4. Assuming

Card 1/4

that the maximum radius of the circle equals

$$R_{max} = \frac{d + \Delta m}{2} \cdot 1.013,$$

where + Δm = plus tolerance. The minimum radius of the circle would then be

$$R_{min} = \frac{d - \Delta m'}{2} 1.013,$$

where Δm' = minus tolerance, d = nominal diameter of the circle. Coordinates x and y of points O_1, O_2, O_3, and O_4 are equal. They are determined on the assumption that Ne and MK equal minimum diameter of the circle in the hot state. From Fig. 2, $R_{min} = \sqrt{y^2 + x^2} = R_{max} + x$ or $R_{min} + 1.41x = R_{max} + x$. Denote $R_{max} - R_{min} = \Delta s$, then $x = y = 2.43\Delta s$. Arches Me and Nk are drawn with radius R from points n and n_1, respectively. In accordance

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with the above, the authors deduce value R (see Fig. 2 attached) from equation $(R - b)^2 = R^2$,

$b = R_{min} - R_{min} \cdot 0.7071 + 0.2924 \Delta s = R_{max} \cdot$

$\cdot 0.2929$, $a = 0.7071 \cdot R_{min}$. In solving equation $(R-b)^2 = R^2$, value $\frac{0.8535 \Delta s^2}{R^2}$ is too small to be considered so that $R = R_{max} - 1.7 \Delta s$. The authors assume that the height of the roll pass is $h_k = D_{max} - 1.4142 \Delta s$. Experimental rolling of round shapes at Stalino Metallurgical Plant (Stalinskiy metallurgicheskiy zavod) showed the expediency of the new design, dimensional accuracy improved and roll pass life increased. There are 2 figures.

Design of Round-Finishing Roll Pass

75581
SOV/130-59-10-13/20

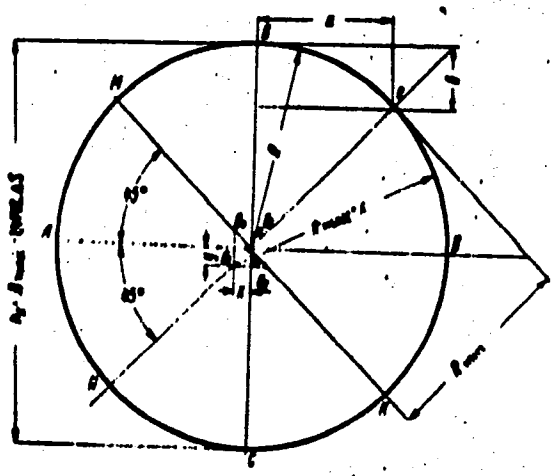

Fig. 2. Design of Round-Finishing Roll Pass.

ASSOCIATION: Stalino Metallurgical Plant (Stalinskiy metallurgicheskiy zavod)

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S/137/61/000/007/038/072
A060/A101

AUTHOR: Konovalov, I. M.

TITLE: Efficient grooving of section mills

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1961, 19, abstract 72148 ("Tr. Konferentsii: Tekhn. progress v tekhnol. prokatn. proiz-va". Sverdlovsk, Metallurgizdat, 1960, 373-380)

TEXT: Investigations are carried out to establish the spread under rolling of an oval in a square, rhombus in a square, and a square in smooth rolls. On the basis of the investigations carried out, for rolling with a minimal number of passes and strip spread B/h = 1 - 2, a system of rhombic-rhombic passes is used and instead of a ribbed preplanishing pass a square with squashed-in edges was used. This system was applied for rolling strips with dimensions: 8 x 16, 21 x 26, 20 x 30, 20 x 38, 18 x 35 mm, and others. Depth calculations for the depth of grooves of conjugated passes, rolling diameters of three-high stands, graphs of spread distribution of circular passes of various diameters, and the recommended shape for constructing a planishing circular pass are given.

[Abstracter's note: Complete translation] A. Bulanov

Card 1/1

S/133/62/000/012/001/012
A054/A127

AUTHORS: Yefimov, V.A., Candidate of Technical Sciences, Legenchuk, V.I., Sivtsov, G.V., Konovalov, I.M., Bykov, G.D., - Engineers

TITLE: Top-pouring steel under slag

PERIODICAL: Stal', no. 12, 1962, 1,074 - 1,078

TEXT: To improve the quality of the surface of top-poured low-carbon steel ingots, the processes taking place at the contact-surfaces of metal, slag and ingot-mold have been investigated at the Cherepovetskiy metallurgicheskiy zavod (Cherepovetsk Metallurgical Plant). The quality of the ingot surface is known to depend on the size of the liquid metal meniscus forming at the place of contact between mold wall and metal. The radius of this convex meniscus depends on the surface stresses at the boundary between metal and liquid slag. It was found that addition of synthetic slags on the mold bottom considerably improved the conditions of skin formation and, consequently, also the quality of the metal surface. For, if the slowly rising metal is covered by a low-smelting slag layer, the latter will protect the metal against oxidation and cooling, it will adsorb

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A054/A127

Top-pouring steel under slag

the high-smelting reduction products and prevent the creasing of the skin. The liquid slag penetrates between the metal meniscus and the mold wall and forms a heat-insulating layer. This will cause the skin of the metal to cool down more slowly and will reduce the shrinkage stresses. The slag composition must ensure a heat-insulating layer of optimum thickness between mold wall and ingot. The greater the meniscus radius, the thicker the slag crust will be. The optimum surface tension of the slag must be determined experimentally. The required viscosity of the synthetic slag can be ensured by addition of liquefiers. Moistening of the mold wall tends to thicken the solidifying slag layer. It is advisable to coat the mold wall with a substance of high surface tension, such as aqueous graphite suspension or lime milk. The method has been applied in the top-pouring of Ст.3сп (St.3sp), 3т (3t) and 19 Г (19G) low-carbon grades. The following slag compositions were tested:

	A	B	C	D	E
Components, %	-	100	90	95	93
cupola furnace slag	24	-	10	5	7
fluorite	1-0	3-0	3-0	5-2	3-0
Grain size, mm					

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Top-pouring steel under slag

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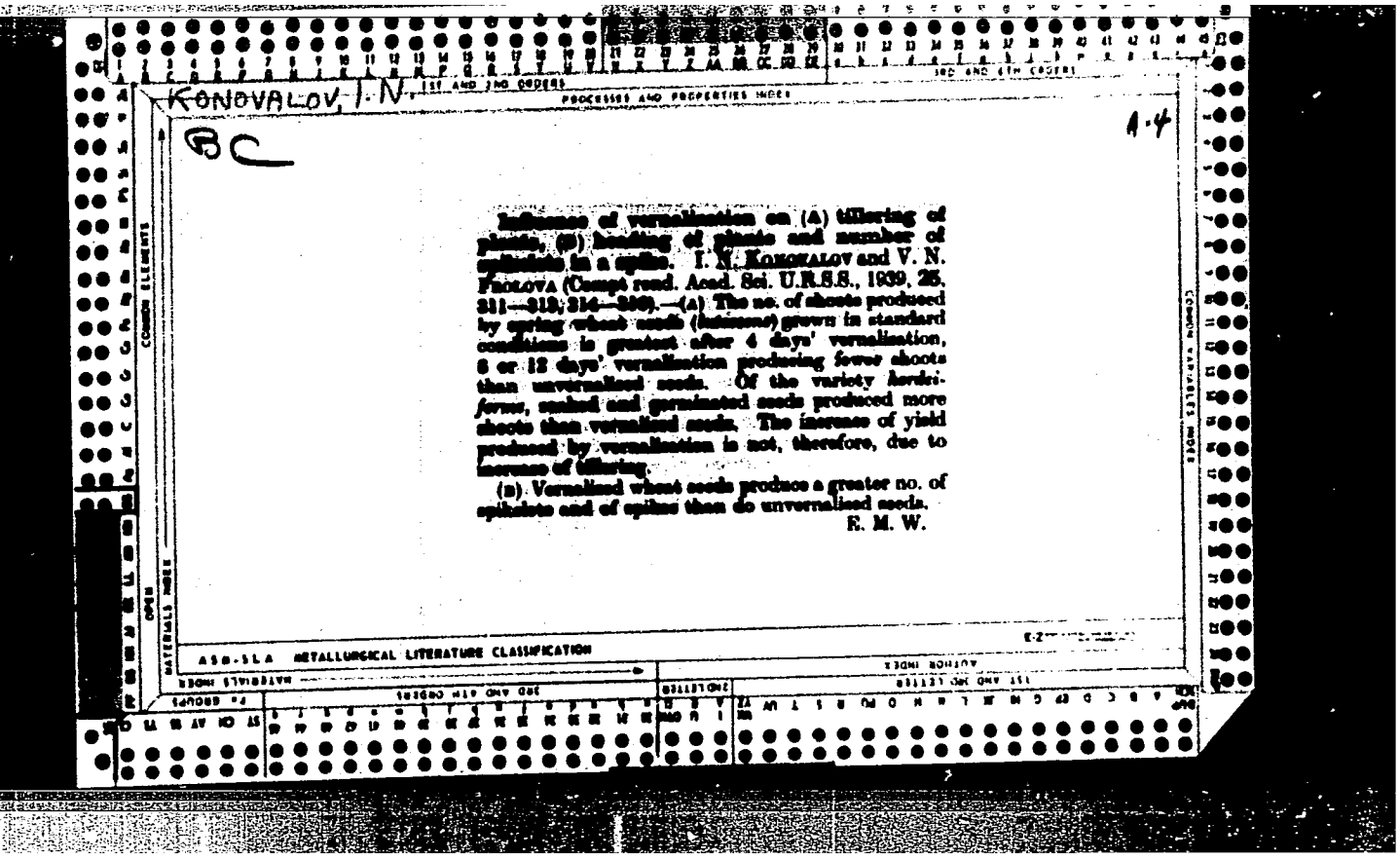
A054/A127

fissures in the latter was reduced by a factor of 4, that of scales by a factor of 6. The labor consumption for cleaning the 13.6-ton slabs poured under slag decreased by a factor of more than 2. The article contains formulae for the calculation of the forces involved in the formation of the meniscus and the slag layer. There are 4 figures.

ASSOCIATION: Institut ispol'zovaniya gaza AN USSR (Institute of Gas-Utilization of the Academy of Sciences of the Ukrainskaya SSR) and Cherepovetskiy metallurgicheskiy zavod (Cherepovetsk Metallurgical Plant)

Card 4/4


KONOVALOV, I. N.

BC

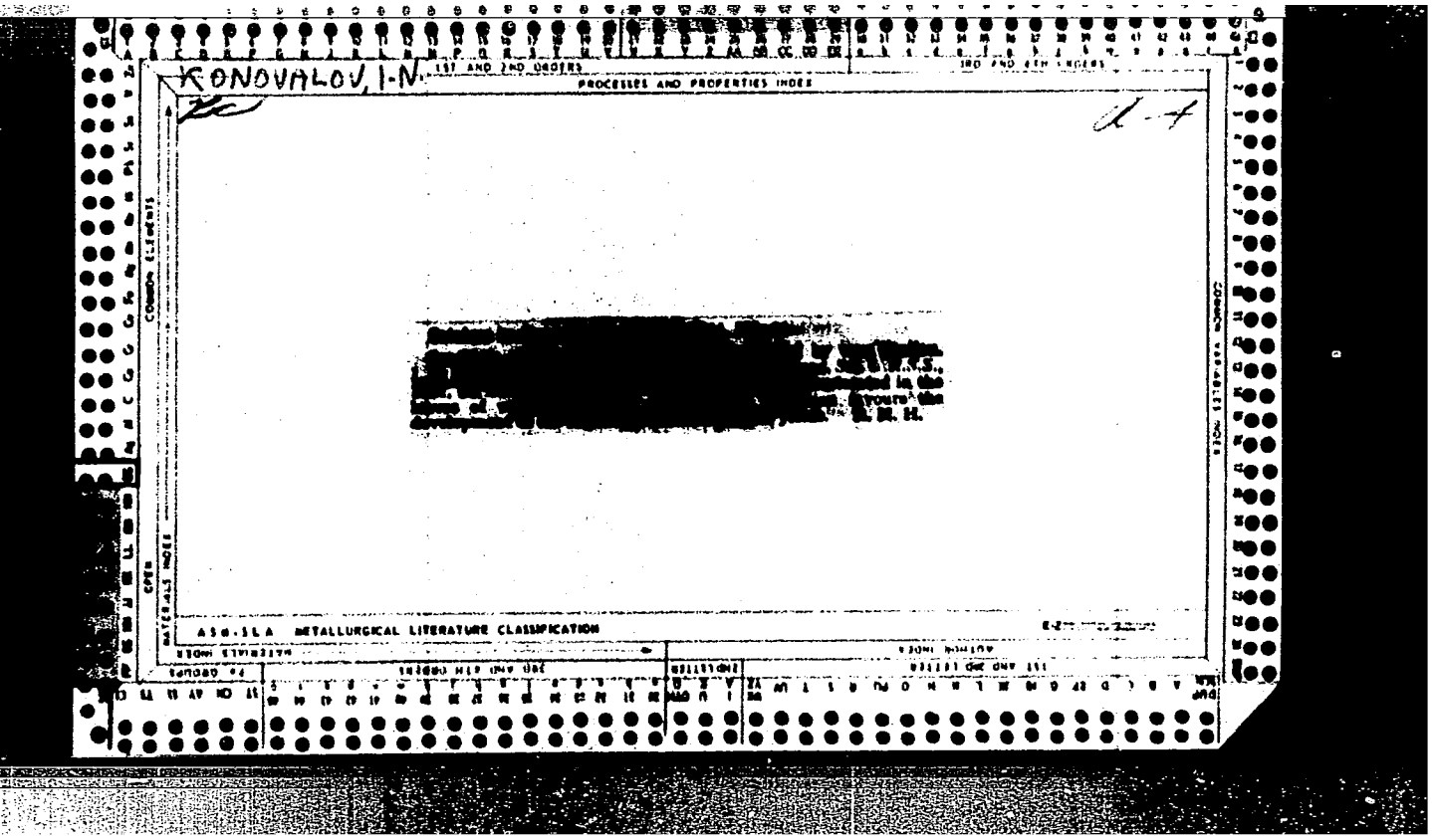
1-4

Influence of vernalisation on (A) tillering of plants, (B) heading of plants and number of spikelets in a spike. I. N. KONOVALOV and V. N. FROLOVA (Compt rend. Acad. Sci. U.R.S.S., 1939, 25, 211—213; 214—216).—(A) The no. of shoots produced by spring wheat seeds (*Istinnaya*) grown in standard conditions is greatest after 4 days' vernalisation, 8 or 12 days' vernalisation producing fewer shoots than unvernalised seeds. Of the variety *lutescens*, soaked and germinated seeds produced more shoots than vernalised seeds. The increase of yield produced by vernalisation is not, therefore, due to increase of tillering.

(B). Vernalised wheat seeds produce a greater no. of spikelets and of spikes than do unvernalised seeds.

E. M. W.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



KONOVALOV, Dr. I. N.

PA 69T1

USSR/Academy of Sciences Feb 1948

"Review of 'A Great Reformer of Nature - Ivan Vladimirovich Michurin' by Yu. I. Milenushkin," Dr I. N. Konovalov, 2 p

"Priroda" Vol XXXVII, No 2

An 80 page pamphlet written in popular style which describes achievements of Soviet Scientist Michurin.

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KONOVALOV, I. N.

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